

**Abstract**

Method for measuring the presence or absence of chemical groups, in particular  
5 phosphate groups, attached to biological molecules in a sample in which these  
molecules are tagged with fluorescent markers and these fluorescent markers  
are activated by means of irradiating the sample with light. The method is char-  
acterized by the following steps: a) Use of a fluorescent marker, the fluorescence  
lifetime of which assumes a different value depending upon the presence or ab-  
10 sence of phosphate groups attached to the biomolecule; b) Measurement of the  
fluorescence lifetime of the fluorescent marker attached to a biomolecule and  
selected in accordance with Step a); c) Classification of the biomolecules in ac-  
cordance with the presence or absence of phosphate groups attached to these,  
based on the different lifetime of each.

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(Fig. 1)